GSAS V5.5 Release Notes

GSAS Team

April 2009

Introduction

GSAS 5.5 fixes a problem with meteorological data, adds the global mean atmosphere pressure to the elevation data file headers, and changes the saturation index.

General Changes

Fixed a problem where the ANC01 meteorological data files were not being utilized correctly. This had the effect that most meteorological-based values were not interpolated to the time of the data in previous versions of GSAS.

The changes for setting saturation index in Release 29 (GSAS 5.4) were removed and now saturation index is the same as it was for release 28 (GSAS 5.3).

L1A Changes (GLA01, 02, 03 and 04)

Meteorological parameters are properly interpolated.

Altimetry Changes (GLA05, 06, 12, 13, 14, and 15)

Changed the gain index into the saturation table back to the code used in GSAS version 5.3. This generally increases the values of saturation index and will result in providing needed range corrections on higher-level products that were not present on Release 29 data.

Added the global mean atmospheric pressure (globAvSrfPres) and the associated time (gASP_t) to the product headers on GLA06 and GLA12-15.

Meteorological parameters are properly interpolated. In effect the pre GSAS version 5.5 for each specific location used a fixed value for 6 hours. Analysis indicates that, for most data, this was under a centimeter level range change.

Atmosphere Changes (GLA07, 08, 09, 10 and 11)

Meteorological parameters are properly interpolated.

Product Format/Definition Change Summary

No product format changes were made in this release.

Known Problems

None.

Release Information

The ClearCase label for this release is RELEASE_5.5.

Products generated by this software will be labeled as Release 30 by SDMS.

The release date is April 13, 2009.

Version numbers have been updated to “V5.5 Apr 2009". This should be verified during operation by checking the version information in the appropriate ANC06 files.

SMDS Impact

The distribution tarfile is on glasdev.wff.nasa.gov at the following location:

/glasdev1/v5/dist/gsas_v5.5.tar.Z.

Bundle Changes

None.

ANC File Changes

New ANC07 files should be ingested.

New ANC45/ANC46 files should be ingested.

All ANC01s need to be re-created by met_util.

Detailed Change Notes

0002847: Update ANC45 version information for GSAS v5.5

Updated the VersionID within ANC45 to “30”.

0002834: During GLAS_Alt / Elevation Runs, Only One PrecipWater Table File (ANC01*_0001_*) Is Being Read

Fixed a problem where the ANC01 meteorological data files were not being read correctly. This means that most meteorological-based values were incorrect in previous versions of GSAS. This item fixes that problem.

0002752: Global Mean Pressure needed to compute IB correction

Added the global mean atmospheric pressure (globAvSrfPres) and the associated time (gASP_t) to the headers for gla06 (two sets), and 12-15 (five sets). The values are added as “Product Specific Attributes” within the product headers. Product Specific Attributes are described in Appendix A of the “GLAS Standard Data Products Specification - Level 2, Version 8”.

0002838: Change The Index For The Saturation Index Threshold Table

Changed the gain+1 index into the saturation threshold table to gain. Normally this yields higher saturation index values than the GSAS version 5.4 code was providing.

0002506: g95 errors for wf_lib

Minor fixes for compatibility with G95 & Linux.

Additional Information

Changed Files:

```
data/anc45_001_01_0001.dat@@/main/WFF/w2847/1
data/anc45_001_01_0002.dat@@/main/WFF/w2847/1
data/anc45_001_01_0003.dat@@/main/WFF/w2847/1
data/anc45_001_01_0004.dat@@/main/WFF/w2847/1
data/anc45_001_01_0005.dat@@/main/WFF/w2847/1
data/anc45_001_01_0006.dat@@/main/WFF/w2847/1
data/anc45_001_01_0007.dat@@/main/WFF/w2847/1
data/anc45_001_01_0008.dat@@/main/WFF/w2847/1
data/anc45_001_01_0009.dat@@/main/WFF/w2847/1
data/anc45_001_01_0010.dat@@/main/WFF/w2847/1
data/anc45_001_01_0011.dat@@/main/WFF/w2847/1
data/anc45_001_01_0012.dat@@/main/WFF/w2847/1
data/anc45_001_01_0013.dat@@/main/WFF/w2847/1
data/anc45_001_01_0014.dat@@/main/WFF/w2847/1
data/anc45_001_01_0015.dat@@/main/WFF/w2847/1
src/common_libs/exec_lib/OpenFiles_mod.f90@@/main/WFF/w2834/2
src/common_libs/exec_lib/fCntl_mod.f90@@/main/WFF/w2834/2
Makefile@@/main/WFF/wcr2752/5
src/common_libs/anc_lib/anc12_dem_mod.f90@@/main/WFF/wcr2752/5
src/common_libs/platform_lib/const_glob_mod.f90@@/main/WFF/wcr2752/15
src/common_libs/prod_lib/GLA06_hdr_mod.f90@@/main/WFF/wcr2752/16
src/common_libs/prod_lib/GLA12_hdr_mod.f90@@/main/WFF/wcr2752/11
src/common_libs/prod_lib/GLA13_hdr_mod.f90@@/main/WFF/wcr2752/11
src/common_libs/prod_lib/GLA14_hdr_mod.f90@@/main/WFF/wcr2752/12
src/common_libs/prod_lib/GLA15_hdr_mod.f90@@/main/WFF/wcr2752/12
src/elevations/e_calctrop_mod.f90@@/main/gsfc_int/cr2752/14
src/met_util/SDMS_met_script@@/main/gsfc_int/cr2752/2
src/wf_lib/W_Assess_mod.f90@@/main/gsfc_int/cr2838/5
data/anc07_001_01_0004.dat@@/main/gsfc_int/pr2506/2
src/common_libs/anc_lib/anc07_wf_mod.f90@@/main/gsfc_int/pr2506/2
src/common_libs/platform_lib/const_wf_mod.f90@@/main/gsfc_int/pr2506/3
src/wf_lib/W_Assess_mod.f90@@/main/gsfc_int/pr2506/8
src/wf_lib/W_FunctionalFt_mod.f90@@/main/gsfc_int/pr2506/4
src/wf_lib/W_MeanSDev_mod.f90@@/main/gsfc_int/pr2506/1
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